KIS

4027 Clipper Court
Fremont, California 94538

Tel 510.933.1900
Fax 510.933.1915
http://www.kiscc.com

Statement of Work

Virtualization of Critical Systems for Fault Tolerance

Prepared for:

City of Alameda

950 West Mall Square, Room 1875
Alameda, CA 94501

Version 3.1
June 22, 2011

This page left blank for purposes of pagination

Table of Contents

This page left blank for purposes of pagination

Company Background: KIS

Keep IT Simple (KIS) is a professional services firm and value added reseller which is headquartered in Fremont, California, with branch offices in California's San Joaquin Valley (Fresno), Cleveland, Ohio and Kansas City, Missouri. The company was incorporated as Sable Computer on November 3rd, 1988, and has done business as "Keep It Simple Computer Center", "Keep IT Simple", and now "KIS".

Practice Areas: KIS is organized into practice areas centering on Virtualization, Microsoft, Novell, Security/Infrastructure, Enterprise Systems, and Training. A "virtual team" of engineers is assembled from each applicable practice area to meet the specific needs of each client engagement. This approach allows technical coverage of projects involving any, some, or all of these technologies.

Training: We are an authorized training center for many of our key technology vendors. Our Training Department can assist each client in creating whatever mix of custom and standardized technical training is needed for a specific project or goal.

Partnerships: In terms of capabilities and vendor relationships, KIS is a VMware Enterprise Partner, Microsoft Gold Partner, Novell Platinum Partner, Cisco Premier Partner, Citrix Gold Partner, and holds many industry certifications for Storage and Data management/recovery solutions.

Support Excellence: For many years, we have been and continue to be a top tier partner for our vendors, including winning multiple awards for the high quality of the support we deliver to end users. This status provides our migration teams access to top level support from each vendor. The result is faster, more efficient support due to understanding of cross-platform capabilities and limitations.

Project Management: KIS has earned a positive reputation for its innovative project management. A unique "mentoring" approach is utilized, providing as much (or as little) knowledge transfer as the client is comfortable with. When a client is made comfortable with a given solution, they'll be confident in taking over the solution at the conclusion of the project.

We've satisfied clients both inside California and across the United States. Our ability to scale to each client's specific project needs has resulted in our providing subcontracting and technical resources for the consulting units of Microsoft, Novell, and Dell.

This page left blank for purposes of pagination

Summary of Existing Situation

The City of Alameda has 500 workstations running a variety of government and office applications. Due to budgetary constraints, there have been no major IT updates since the NetWare 6.5 upgrade project in 2004-2005.

There are many single points of failure in critical City systems. The existing EMC Storage Area Network (SAN) is nearly full, and is considered obsolete by the manufacturer.

There is not currently a Disaster Recovery site set up which can handle restoration of the City's critical systems within a 24 hour period.

This page left blank for purposes of pagination

Specific Goals

The following specific goals were identified, including:

- Ability at each site to recover from a server hardware failure.
- Ability to automatically migrate services from one site to another, especially in the event of a disaster.
- Replacement of server hardware long past the end of its intended lifespan.
- Reduction of energy costs.
- Reduction of “single points of failure” for critical City systems.

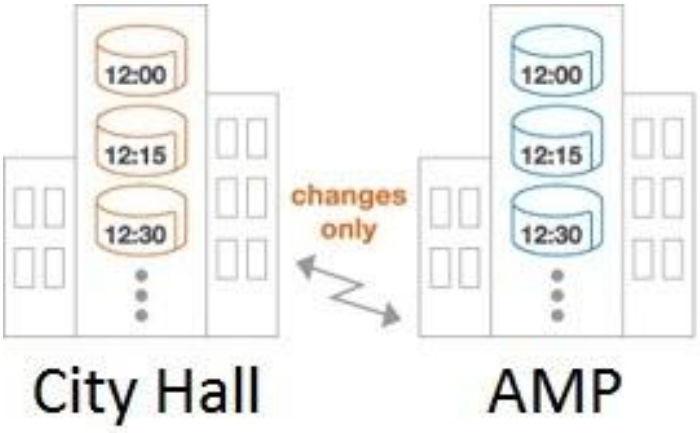
This page left blank for purposes of pagination

Overview of Solution

KIS proposes the creation of a dual-pronged solution which will address all of the issues outlined above, and meet the specific identified goals.

1. Plan for Fault Tolerance for Critical Systems.

Survey and plan for virtualization of critical systems, including establishing two VMware-based clusters, one at City Hall and a second at Alameda Municipal Power.



2. Install New Storage Infrastructure.

Install two new Dell Compellent SANs running over 1GB iSCSI. The installations will be performed by Compellent personnel, with KIS engineers shadowing to ensure that the completed installation meets all KIS requirements for the VMware installations to be performed.

One installation will be at City Hall. The second installation will be Alameda Municipal Power.

3. Virtualize Systems

KIS engineers will virtualize up to 5 physical servers (2 x Windows 2003 R2, 3 x NetWare 6.5.) All servers will be virtualized at the current OS version, without upgrades other than installation of the latest patches and VMware Tools. Documentation on how to “P2V” a Windows server will be produced.

4. Install VeeAm Backup & Recovery.

Install VeeAm’s Backup & Recovery product, and set it up to automatically mirror and manually cutover failed VMs to the disaster recovery site. KIS will configure VeeAm to do this for one VM, and train a specified City of Alameda IT person to set up the remaining VM

This page left blank for purposes of pagination

KIS Responsibilities

This consulting project includes the following deliverables:

1. Consultants performing in an advisory role, to provide the City's IT team with timely research on related technologies during the tactical and strategic rollouts.
2. Consultants performing system level consultation in regard to the assessment, design, and deployment of advanced networking technologies and solutions.
3. From time to time, the consultants may need to provide informal verbal or written recommendations, in the form of onsite briefings and/or email or voicemail messages as a part of their tactical advisory role. Research and writing may be performed off site.
4. Meetings and skills transfer sessions will be conducted at the Client's facilities during regular Monday through Friday working hours.
5. Two Compellent iSCSI-based SANs, one each in City Hall and Alameda Municipal Power, with data replication from the City Hall SAN to the Alameda Municipal Power SAN.
6. Two VMware 4.1 clusters, each cluster consisting of two HP DL360 servers, configured for automatic failover of guest virtual machines (VMs) in the event of a hardware-based server failure.
7. Virtualization of up to 10 physical NetWare 6.5 and 10 Windows Server 2003 R2 servers at City Hall.
8. VeeAm Backup & Recovery software installed and demonstrated as working to provide emergency cutover of one VM from City Hall to Alameda Municipal Power.
9. Documentation on how to perform manual failover and failback, as well as automatic failover and failback.

City of Alameda Responsibilities

The City of Alameda, California shall provide the following:

1. A minimum of two (2) weeks lead time to allow scheduling of properly skilled consultants for engagement.
2. Appoint and make available a project manager at City of Alameda to work with KISCC for the completion of Services. (This person must have authority to act on behalf of the City.)
3. Provide any needed project related information and direction to KIS Computer Center employees during the life of the project.
4. Furnish to KIS Computer Center prior to execution any documents or other agreements it desires KISCC employees to sign and abide by, including but not limited to, safety and hazardous materials warning, non-disclosure agreements and procedural documents.
5. Furnish consultants with information and data on Client's operations, activities, and existing systems, as required to achieve the project objectives.
6. Provide KISCC consultants with needed security access to networking systems and Client's facilities during the performance of Services.
7. Provide adequate workspace at each facility where Services will be performed. This includes, but is not limited to, a desk with:
8. Suitable and working power outlet for a laptop computer
9. Telephone with outside voice line access
10. High-speed internet access for project-related research
11. The administrator login and password, or an admin-equivalent login and password for all NDS, eDirectory, and/or Active Directory trees and/or Windows workgroups or standalone servers.
12. If necessary, Client shall be solely responsible to contract for telecommunications facilities (data communications circuit, analog phone lines, wiring, etc.), and for the costs associated with such facilities. Availability of communications lines is a critical success factor for the project.
13. Client shall be responsible for the data backup (and verification of said backup) of all computer systems, and for maintaining, cataloging, tracking, and retrieving backup media.

Exclusions

The following items are *not* included in this scope of work:

1. Data Backup and Offsite Backup. City of Alameda is responsible for all data backup of systems before and after virtualization.
2. Other than the migration/consolidation of a physical NetWare 5.1 server to a virtual NetWare 6.5 server, no OS upgrades are included.
3. GroupWise or any other application version upgrades or reconfigurations.
4. Installation and/or implementation and/or reconfiguration of a desktop management system such as LANDesk or ZENworks
5. Installation of a file analysis system such as Novell File Management Suite.
6. Reconfiguration of servers and/or server functions. All servers will be virtualized “as they are”, with the single exception of adding more disk space as needed and available.
7. Reconfiguration or installation of suitable power systems to accommodate any of the systems included in this Scope of Work.
8. Re-racking/stacking of existing equipment in the City Hall computer room to make room for the new equipment included in this Scope of Work.

.

This page left blank for purposes of pagination

Pricing

The work described in this SOW will be carried out for a fixed cost of $29,994, as outlined below, paid in a single block. This includes a 25% discount off normal rates.

Task Item	Task Hours	Task $	Discount	Price	Pct of Total
PHASE 1 – Systems Assessment and Design					
Project Kickoff Meeting and workspace setup	6	1,210	(303)	908	
Plan and confirm IP address ranges and assignments for all components	4	740	(185)	555	
Create diagram of system showing SANs, VMware hosts, and replication	5	958	(239)	718	
Confirm list of servers to be virtualized	3	605	(151)	454	
Create VMware/Compellent LUN/VMDK storage design	10	1,950	(488)	1,463	
Project Management (this phase only)	4	940	(235)	705	
Project Meetings (this phase only)	6	1,210	(303)	908	
PHASE 1 TOTALS:	**38**	7,613	(1,903)	**5,709**	19.03%
PHASE 2 – Install new Storage and Virtualization Infrastructure					
Confirm storage design with Compellent engineer onsite	3	605	(151)	454	
Work with Compellent to ensure that systems are configured as needed	4	740	(185)	555	
Configure, upgrade firmware, and burn in 4 DL360 servers	8	1,480	(370)	1,110	
Install DL360 servers at City Hall and in rack to be moved to AMP	8	1,480	(370)	1,110	
Load and configure VMware on 2 clusters (including virtual vCenter servers)	4	740	(185)	555	
Test VM failover on 2 clusters	4	740	(185)	555	
Project Management (this phase only)	1	235	(59)	176	
Project Meetings (this phase only)	3	605	(151)	454	
PHASE 2 TOTALS:	**35**	6,625	(1,656)	**4,969**	16.57%
PHASE 3 – Virtualize Existing Systems					
Virtualize 2 Windows servers and document P2V Process	20	3,900	(975)	2,925	
Virtualize up to 3 NetWare 6.5 servers (8 hours per server)	28	5,380	(1,345)	4,035	
Project Management (this phase only)	4	940	(235)	705	
Project Meetings (this phase only)	12	2,420	(605)	1,815	
Phase 3 Totals:	**64**	12,640	(3,160)	**9,480**	31.61%
PHASE 4 – Implement and test VeeAm Backup & Recovery					
Install and configure VeeAm Backup & Recovery on two clusters	16	2,960	(740)	2,220	
Test VeeAm failover and failback between City Hall and AMP	32	5,920	(1,480)	4,440	
Create VeeAm Manual/Automatic Failover/Failback documentation	16	3,160	(790)	2,370	
Project Management (this phase only)	2	470	(118)	353	
Project Meetings (this phase only)	3	605	(151)	454	
Phase 4 Totals:	**69**	13,115	(3,279)	**9,836**	32.79%
PROJECT TOTALS:	**206**	**39,993**	**(9,998)**	**29,994**	100.00%

This page left blank for purposes of pagination

The “Secret Sauce” Of Virtualization

There will be always vendors who will promise you a perfect virtualization environment if only you choose their specific set of hardware.

In reality, it’s not just the quality of the hardware you choose, it’s also the quality of the *consulting services* that matters.

It’s easy for a company to become VMware-certified. It’s not so easy to become certified as a VMware Enterprise Solution Provider.

VMware recommends that Site Recovery Manager only be installed by a VMware partner certified in both Infrastructure Virtualization and Business Continuity. KIS holds both competencies, as well as Desktop Virtualization.

We *know* how to virtualize your business infrastructure because we’ve done it before, and done it repeatedly. We use not only VMware’s Best Practices, but add to that our own experiences and internal best practices to bring you a VMware SRM installation that works right the first time and *every* time.

The *real* secret to a successful virtualization lies in choosing a partner who utilizes best practices, and who will work with you to both enhance your operational environment while respecting your business methods and traditions.

That partner is KIS.

This page left blank for purposes of pagination

References

Jon Dressel
IT Operations Manager
Med America Billing Services, Inc.
209-567-5767
dresselj@medamerica.com

Doug Kenyon
IT Manager
Sakata Seeds
408-778-7758
dkenyon@sakata.com

Todd Schmitzer
Manager, Infrastructure and Systems
Santa Clara University
408-210-3166
tschmitzer@scu.edu

George Wagner
Director of Technology
Jesuit High School of Sacramento
wagnerg@jhssac.org
916-480-2193

This page left blank for purposes of pagination

Next Steps

Upon receipt of a signed copy of this Scope of Work and a signed Purchase Order for all professional services, KIS will begin scheduling the work described herein.

The typical lead time to begin implementation once a Scope of Work has been executed is generally eight to ten business days.

This page left blank for purposes of pagination

Signature Page

Agreed to on behalf of KIS	Agreed to on behalf of City of Alameda
_____	_____
Allan Hurst	Name:
Partner	Title:
Sable Computer d/b/a KIS	City of Alameda, California
Date: June 22, 2011	Date:

Assigned Client P. O. Number: _____